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09/894,472	06/27/2001	Yoshiyuki Kunito	450100-03296	5943

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EXAMINER

ABELSON, RONALD B

ART UNIT PAPER NUMBER

2666

DATE MAILED: 09/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/894,472

Applicant(s)

KUNITO ET AL.

Examiner

Ronald Abelson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 April 2003 and 27 June 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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Drawings

1. Figures 1 and 2 should be designated by a legend such as -- Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Note, since the last office action, no new figures were received by the examiner.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 38 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The applicant does not define the terms "high use frequency" and "low use frequency".

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

5. Claims 17 and 23 rejected under 35 U.S.C. 102(a) as being anticipated by applicant's admitted prior art 'AAPA'.

Regarding claims 17 and 23, AAPA teaches a data transmission/reception apparatus (fig. 1 combination of boxes 205, 203a), for use in a network system (fig. 2) comprising a plurality of communication nodes (fig. 2 boxes 201, 203c,d, 202, 204, and unlabeled node directly above node 203c), for relaying data transmitted from a first communication node (fig. 2 box

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201) and transmitting relayed data to a second communication node (fig. 2 box 203c). Note, the examiner corresponds the data converter (fig. 2 box 205) and communication node (fig. 2 box 203a) of AAPA as the data converter of the applicant since both could be co-located.

AAPA teaches a data reception means for receiving data transmitted from the first communication node (fig. 2 see arrow from box 201 to 205).

AAPA teaches a route control means for determining a communication route, based on a format of the data received by the reception means (fig. 2 box 205, format conversion from MPEG2 to MPEG4, thereafter, data transmitted through route R102, pg 3. lines 9-13), and/or a format conversion parameter associated with a type of format conversion of another communication node.

AAPA teaches a transmission means for transmitting the data received by the reception means to a third communication node (fig. 2 box 203c) based upon the format of the received data, and in accordance with the communication route determined by the route control means (fig. 2 box 205, format conversion from

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MPEG2 to MPEG4, thereafter, data transmitted through route R102,
pg 3. lines 9-13).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1, 3, 7-9, 11, 15, 16, 19, 23, 25, 29, 31, 35, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art 'AAPA' in view of Bremer (US 6,553,002).

Regarding claims 1, 9, and 29, AAPA teaches a data converter (fig. 2 combination of boxes 205, 203a) for use in a network system (fig. 2) comprised of a plurality of communication nodes (fig. 2 boxes 203c,d and unlabeled node directly above node 203c) in which data transmitted from a transmitter communication node (fig. 2 box 201) is received by a

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set of receiver communication nodes (fig. 2 boxes 203c,d and unlabeled node directly above node 203c). Note, the examiner corresponds the data converter (fig. 2 box 205) and communication node (fig. 2 box 203a) of AAPA as the data converter of the applicant since both could be co-located.

AAPA teaches a data reception means for receiving data transmitted from the transmitter communication node to a first receiver communication node (fig. 2 box 203a, communication route, pg. 3 lines 5-8), with the transmitted data being formatted in a first format (MPEG2, col. 3 lines 5-8).

AAPA teaches a format conversion means comprising at least one format converter (fig. 1 box 205) each used for converting a format of the transmitted data received by the reception means (fig. 2 box 205, conversion from MPEG2 to MPEG4, pg. 3 lines 9-11).

AAPA teaches a route control means for determining a route, based on a format conversion parameter concerning the format of the transmitted data received by the reception means, a format conversion performed by the format conversion means (fig. 2 box 205, format conversion from MPEG2 to MPEG4, thereafter, data

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transmitted through route R102, pg 3. lines 9-13), a format conversion performed by another communication node, and/or the communication network parameter received by the information reception means.

AAPA teaches a transmission means for transmitting the transmitted data converted by the format conversion means (fig. 2 box 205) to a second receiver communication node (fig. 2 box 203c) in accordance with the communication route determined by the route control means (pg. 3 lines 9-13).

AAPA is silent on an information reception means for receiving a communication parameter associated with the plurality of communication nodes of the network system.

Bremer teaches an information reception means for receiving a communication parameter associated with the plurality of communication nodes of the network system (query neighboring routers, col. 4 lines 28-38).

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of AAPA by having the routers (fig. 2 box 203a,c,d) send queries to each other. This modification can be performed by following the teachings of Bremer. This would improve the system by permitting the routers

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to update their routing tables according to changing network conditions (Bremer: update entries in the route table, col. 4 lines 28-38).

Regarding claims 3, 11, 19, 25, and 31 route control means determines a route based on a transmission delay between the communication nodes (Bremer: bottlenecks, col. 4 lines 35-38).

Regarding claims 7, 15, and 35, route control means determines a route based on information concerning a format of transmitted data which can be transmitted from the transmitter communication node, as the format conversion parameter (AAPA: MPEG2, MPEG4, pg. 3 lines 9-11). Since the server transmits MPEG2 data, a possible route for the data is from the server the format converter (fig. 2 box 205) since the format converter accepts MPEG2 data.

Regarding claims 8, 16, and 36, route control means determines a route based on information concerning a format of transmitted data which can be received by the receiver communication node (AAPA: fig. 2, pg. 3 lines 5-11). Note, since receiving PC (fig. 2 box 202) accepts MPEG2 data, data routed from the server to the PC does not go through the format

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converter (fig. 2 box 205), but since receiving PDA (fig. 2 box 204) accepts does not accept MPEG2 data, data routed from the server to the PDA must go through the format converter (fig. 2 box 205).

8. Claims 2, 10 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of AAPA and Bremer as applied to claims 1, 9, and 29 above, and further in view of Ota (US 5,347,272).

The combination is silent on the route control means determines the communication route, based on information associated with a communication distance between the communication nodes.

Ota teaches determining a communication route based on information associated with a communication distance between the communication nodes (fig. 8, col. 1 lines 12-40).

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of the combination of AAPA and Bremer by having the end systems (AAPA: fig. 2 box 201, 202, 204) store the shortest routes. This can be accomplished by having the intermediate nodes (AAPA: fig. 2 box 203a,c,d) determine the shortest routes and broadcast this information to

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the end systems. This would improve the system by permitting the data to be transmitted efficiently over the shortest route.

9. Claims 18 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA as applied to claims 17 and 23 above, and further in view of Ota (US 5,347,272).

AAPA is silent on the route control means determines the communication route, based on information associated with a communication distance between the communication nodes.

Ota teaches determining a communication route based on information concerning a communication distance between the communication nodes (fig. 8, col. 1 lines 12-40).

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of the combination of AAPA by having the end systems (AAPA: fig. 2 box 201, 202, 204) store the shortest routes. This can be accomplished by having the intermediate nodes (AAPA: fig. 2 box 203a,c,d) determine the shortest routes and broadcast this information to the end systems. This would improve the system by permitting the data to be transmitted efficiently over the shortest route.

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10. Claims 4, 12, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of AAPA and Bremer as applied to claims 1, 9, and 29 above, and further in view of Watanabe (US 5,802,049).

Regarding claims 4, 12, and 32, the combination is silent on the route control means determines the communication route, based on information associated with a band used between the communication nodes.

Watanabe teaches a route control means determines the communication route, based on information associated with a band used between the communication nodes (largest possible free band, col. 3 lines 46-49).

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of the combination of AAPA and Bremer by having the routers (AAPA: fig. 2 box 203a,c,d) select a route based upon the largest free bandwidth along the connection. This can be performed by having each router broadcast to the other routers the free bandwidth along its connections. This would improve the system by helping to ensure that the data will be transmitted along a path having sufficient bandwidth to prevent congestion.

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11. Claims 20 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA as applied to claims 17 and 23 above, and further in view of Watanabe (US 5,802,049).

Regarding claims 20 and 26, AAPA is silent on the route control means determines the communication route, based on information associated with a band used between the communication nodes.

Watanabe teaches a route control means determines the communication route, based on information associated with a band used between the communication nodes (largest possible free band, col. 3 lines 46-49).

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of AAPA by having the routers (AAPA: fig. 2 box 203a,c,d) select a route based upon the largest free bandwidth along the connection. This can be performed by having each router broadcast to the other routers the free bandwidth along its connections. This would improve the system by helping to ensure that the data will be transmitted along a path having sufficient bandwidth to prevent congestion.

12. Claims 5, 13, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of AAPA and Bremer as

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applied to claims 1, 9, and 29 above, and further in view of Thomas (US 6,205,211).

The combination is silent on the route control means determines the communication route, based on information associated with a processing delay required for conversion processing at the communication node.

Thomas teaches the route control means determines the communication route, based on information associated with a processing delay required for conversion processing at the communication node (col. 23 lines 38-47).

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of the combination by having the nodes connected to format converters (AAPA: fig. 2 box 203a, 205) broadcast their processing delays. This would improve the system by allowing the system to route data based upon delay requirements.

13. Claims 21 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA as applied to claims 17 and 23 above, and further in view of Thomas (US 6,205,211).

AAPA is silent on the route control means determines the communication route, based on information associated with a

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processing delay required for conversion processing at the communication node.

Thomas teaches the route control means determines the communication route, based on information associated with a processing delay required for conversion processing at the communication node (col. 23 lines 38-47).

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of AAPA by having the nodes connected to format converters (AAPA: fig. 2 box 203a, 205) broadcast their processing delays. This would improve the system by allowing the system to route data based upon delay requirements.

14. Claims 6, 14, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of AAPA and Bremer as applied to claims 1, 9, and 29 above, and further in view of Rexford (US 6,801,502).

The combination is silent on the route control means determines the communication route, based on information associated with an amount of the transmitted data.

Rexford teaches the route control means determines the communication route, based on information associated with an

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amount of the transmitted data (fig. 3 box 302, col. 7 lines 27-30).

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of the combination by transmitting data to a different node once the quantity of data flowing through the current node reaches a threshold. This would improve the system by helping to balance the load through the system.

15. Claims 22 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA as applied to claims 17 and 23 above, and further in view of Rexford (US 6,801,502).

AAPA is silent on the route control means determines the communication route, based on information associated with an amount of the transmitted data.

Rexford teaches the route control means determines the communication route, based on information associated with an amount of the transmitted data (fig. 3 box 302, col. 7 lines 27-30).

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of the AAPA by transmitting data to a different node once the quantity of data flowing through the current node reaches a threshold. This would

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improve the system by helping to balance the load through the system.

16. Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of AAPA and Bremer as applied to claim 29 above, and further in view of Finch (US 6,751,650).

Although AAPA teaches a communication node having a format conversion means (fig. 2 box 205), the combination is silent on a plurality of communication nodes having the format conversion means, wherein different types of format conversion processing are carried out by each of the format conversion means.

Finch teaches a plurality of communication nodes having the format conversion means, wherein different types of format conversion processing are carried out by each of the format conversion means (fig. 1 box 108, 112).

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of the combination by having a plurality of communication nodes having the format conversion means, wherein different types of format conversion processing are carried out by each of the format conversion means. This can be accomplished by adding different types of

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format converters in the system. This would improve the system by allowing for the transfer of different types of data in the system. Note, in the system of AAPA (fig. 2) only MPEG2 and MPEG4 data may be processed.

17. Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of AAPA and Bremer as applied to claim 29 above, and further in view of Bremer (US 6,032,190).

The combination is silent on the transmitter communication node or the receiver communication node can transmit/receive transmitting/transmitted data in a plurality of formats, the route control means obtains a route for every type of format, and controls the transmitter communication node or the receiver communication node so as to transmit/receive the transmitting/transmitted data in any of the plurality of formats.

Bremer (US 6,032,190) teaches the transmitter communication node or the receiver communication node can transmit/receive transmitting/transmitted data in a plurality of formats, the route control means obtains a route for every type of format, and controls the transmitter communication node or the receiver communication node so as to transmit/receive the

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transmitting/transmitted data in any of the plurality of formats (fig. 2, col. 4 lines 51-64).

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of the combination of AAPA and Bremer to modify the format converters (AAPA: fig. 2 box 205) to allow for a plurality of input/output protocols as shown by Bremer (US 6,032,190). This would improve the system by allowing the network to work for a wider variety of protocols.

Response to Arguments

18. Applicant's arguments filed 7/11/2005 have been fully considered but they are not persuasive.

The examiner disagrees with the applicant's contention that AAPA does not teach nor suggest a data reception means for receiving data transmitted from the transmitter communication node to a first receiver communication node, with the transmitted data being formatted in a first format (applicant: pg. 18 last paragraph). As previously shown, AAPA teaches a data reception means for receiving data transmitted from the transmitter communication node to a first receiver communication node (fig. 2 box 203a, communication route, pg. 3 lines 5-8),

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with the transmitted data being formatted in a first format (MPEG2, col. 3 lines 5-8).

The examiner disagrees with the applicant's contention that AAPA does not teach nor suggest a format conversion means comprising at least one format converter each used for converting said first format of the transmitted data received by the reception means at least in part to a second format (applicant: pg. 18 last paragraph). As previously shown, AAPA teaches a AAPA teaches a format conversion means comprising at least one format converter (fig. 1 box 205) each used for converting a format of the transmitted data received by the reception means (fig. 2 box 205, conversion from MPEG2 to MPEG4, pg. 3 lines 9-11).

With respect to amended claims 1, 9, and 29, regarding the applicant's contention the prior art of record does not determine a communication route, based on a format conversion parameter relating to the first format of the transmitted data received by the reception means (applicant: pg. 18 last paragraph), this limitation is not required in the claims. The amended claim language requires a route control means for determining a communication route based on one of the following:

1. a format conversion parameter relating to the first format of the transmitted data received by the reception means
2. format conversion performed by the format conversion means
3. format conversion performed by another communication node
4. communication network parameter received by the information reception means

Regarding amended claims 17 and 23, the applicant repeats the arguments listed above (applicant: pg. 19 last paragraph).

Conclusion

19. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will

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expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronald Abelson whose telephone number is (571) 272-3165. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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RA

Ronald Abelson

Examiner

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